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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *24 September 2003*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-38* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-38* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *24 September 2003* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *02/03/2004, 04/20/2005, 03/06/2006*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

1. This action is in response to the application filed on September 24, 2003.

2. Claims 1-38 are currently pending.

Information Disclosure Statement

3. The Information Disclosure Statements (IDS) submitted on February 3, 2004; April 20, 2005; and March 6, 2006 have been considered by the Examiner.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because the reference character "NE" has been used to designate both "network element" and "edge node".

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference characters not mentioned in the description: 165, 523, 533, 143, 1400, 1500, 1790, and 2110.

6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and

where necessary, the remaining figures must be renumbered and appropriate changes

made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application

must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Specification

7. Applicant is reminded of the proper content of the Specification.

> Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary
> or general statement of the invention as set forth in 37 CFR 1.73. The
> summary is separate and distinct from the abstract and is directed toward
> the invention rather than the disclosure as a whole. The summary may
> point out the advantages of the invention or how it solves problems
> previously existent in the prior art (and preferably indicated in the
> Background of the Invention). In chemical cases it should point out in
> general terms the utility of the invention. If possible, the nature and gist of
> the invention or the inventive concept should be set forth. Objects of the
> invention should be treated briefly and only to the extent that they
> contribute to an understanding of the invention.

8. Paragraphs [0009]-[0027], mostly paragraphs [0028] and [0029], and paragraphs
[0030]-[0035] are merely a recitation of the claims. Appropriate action is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out
> and distinctly claiming the subject matter which the applicant regards as his
> invention.

10. Claims 5 and 35 are rejected under the second paragraph of 35 U.S.C. 112 as

failing to particularly point out and distinctly claim the subject matter which the applicant

regards as his invention. The use of abbreviations without definition in the claim

renders the limitation indistinct.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine,
> manufacture, or composition of matter, or any new and useful improvement
> thereof, may obtain a patent therefor, subject to the conditions and requirements
> of this title.

12. Claims 1-38 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Regarding Claims 1-19:

> Claim 1 is directed to a "software tool" (per paragraph [0037] of disclosure).
> Software *per se* is considered to be an abstract idea and therefore does not fall
> within one of the statutory classes of invention set forth in 35 U.S.C. 101. In
> order to be accepted as statutory subject matter, a computer program must be
> tangibly embodied on a computer readable medium which when executed
> appropriately provides functionality. See MPEP 2106.01(I).
>
> Claims 2-19 are dependent on Claim 1 and therefore are rejected in a like
> manner.

Regarding Claims 20-30:

> Claim 20 is directed to a "computer program" which is software *per se*. See
> discussion above.

Claims 21-30 are dependent on Claim 20 and therefore are rejected in a like manner.

Regarding Claims 31-38:

Claim 31 is directed to a method which in and of itself is considered to be an abstract idea or a mental process. In order to be accepted as statutory subject matter, a method must be limited to a practical application which produces a useful, concrete, and tangible result. This is possible with a computer implemented method, for example. See MPEP 2106(IV)(C).

Claims 32-38 are dependent on Claim 31 and therefore are rejected in a like manner.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 1, 2, 5, 20, 28, 31, 32, 35, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Ngi et al., U.S. Patent Application Publication Number 2003/0158765 A1 (hereinafter referred to as Ngi).

Examiner's Note: The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are

applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Regarding Claim 1:

Ngi teaches an operations, management, capacity, and services (OMCS) tool comprising:

a means for analyzing business parameters for a plurality of network architectures (paragraphs [0031]-[0033] and [0097]); and

a means for comparing the business parameters for said network architectures for determining cost savings of one network architecture versus another and for determining a business solution that articulates the network architecture for reducing total expenditure (paragraphs [0032]-[0033]).

Regarding Claim 2:

Ngi teaches the limitations of Claim 1 as described above.

Ngi further teaches wherein the business parameters comprise the total expenditure; and wherein the total expenditure comprises capital expenditure (CAPEX) and operational expenditure (OPEX) (paragraph [0119]).

Regarding Claim 5:

Ngi teaches the limitations of Claim 1 as described above.

Ngi further teaches wherein the means for analyzing the business parameters comprises a means for analyzing the business parameters for a network architecture having one or more of the following technology: TDM, ATM, FR, IP, VPN, MPLS, and optical Ethernet including fiber, SONET, RPR, and DWDM (paragraph [0055]).

Regarding Claim 20:

Ngi teaches a computer program containing instructions for directing a computer to perform a process for analyzing business parameters for a plurality of network architectures, and comparing the business parameters for said network architectures over a pre-determined study period, the program comprising:

a means for causing the computer to receive data for the plurality of network architectures (paragraphs [0028]-[0029]);

a means for causing the computer to analyze the received data to compute the business parameters for said network architectures (paragraphs [0031]-[0033] and [0097]); and

a means for causing the computer to compare said computed business parameters for said network architectures for determining cost savings of one network architecture versus another and for determining a business solution that articulates the network architecture for reducing total expenditure (paragraphs [0032]-[0033]).

Regarding Claim 28:

Ngi teaches the limitations of Claim 20 as described above.

Ngi further teaches wherein the means for causing the computer to compare said business parameters for said network architectures comprises a means for causing the computer to tabulate and graphically chart the business parameters for said network architectures over said pre-determined study period (paragraphs [0114] and [0123]-[0124]).

Regarding Claim 31:

Ngi teaches a method for developing business solution for a telecommunications network, the method comprising the steps of:

receiving data for a plurality of network architectures (paragraphs [0028]-[0029]);

analyzing the received data to compute business parameters for said network architectures (paragraphs [0031]-[0033] and [0097]); and

comparing said computed business parameters for said network architectures for determining cost savings of one network architecture versus another and for determining a business solution that articulates the network architecture for reducing total expenditure (paragraphs [0032]-[0033]).

Regarding Claim 32:

Ngi teaches the limitations of Claim 31 as described above.

Ngi further teaches wherein the business parameters comprise the total
expenditure; and wherein the total expenditure comprises CAPEX and OPEX
(paragraph [0119]).

Regarding Claim 35:
Ngi teaches the limitations of Claim 31 as described above.

Ngi further teaches wherein the step of analyzing the business parameters
comprises a step of analyzing the business parameters for a network architecture
having one or more of the following technology: TDM, ATM, FR, IP, VPN, MPLS,
and optical Ethernet including fiber, SONET, RPR, and DWDM (paragraph
[0055]).

Regarding Claim 36:
Ngi teaches the limitations of Claim 35 as described above.

Ngi further teaches wherein the step of analyzing the business parameters
comprises a step of adjusting and updating data for said network architectures
(paragraphs [0018] and [0082]).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed
or described as set forth in section 102 of this title, if the differences between the
subject matter sought to be patented and the prior art are such that the subject
matter as a whole would have been obvious at the time the invention was made
to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was
made.

16. Claims 3, 4, 6-10, 15, 16-19, 21-27, 29, 30, 33, 34, 37, and 38 are rejected under

35 U.S.C. 103(a) as being unpatentable over Ngi in view of EURESCOM Project P901-

PF Extended investment analysis of telecommunication operator strategies:

Deliverable 1: Investment analysis framework definition and requirements specification (hereinafter referred to as D1)

Deliverable 2: Investment Analysis Modeling (hereinafter referred to as D2).

Regarding Claim 3:

As described above, Ngi teaches the limitations of Claim 2, but Ngi does not explicitly disclose wherein the CAPEX comprises a network architecture cost, taxes, interests, and depreciation and amortization (D/A) expenses; and the OPEX comprises a management processes cost, a leasing cost, and sales, general and administration (SG&A) expenses.

However, EURESCOM P901-PF discloses wherein
the CAPEX comprises a network architecture cost (D1, Volume 2: page 5, paragraph 1), taxes, interests, and depreciation and amortization (D/A) expenses (D1, Volume 2: page 39, paragraph 3); and

the OPEX comprises a management processes cost (D2, Volume 2: pages 34-35, Section 3.4),
a leasing cost (D1, Volume 2: page 86, paragraph 7; page 87, paragraph 1), and sales (D1, Volume 2: page 38, paragraph 10),
general and administration (SG&A) expenses (D1, Volume 2: page 6, paragraph 9; page 7, paragraphs 4 and 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to include more business parameters in order to enable a comprehensive business decision.

Regarding Claim 4:

As described above, Ngi teaches the limitations of Claim 2, but Ngi does not explicitly disclose wherein the business parameters further comprise revenue; capacity; return on investment (ROI); earnings before interest, taxes, and deprecation and amortization (EBITDA); earnings before interest and taxes (EBIT); OPEX as percentage of revenue; and total expenditure as percentage of revenue.

However, EURESCOM P901-PF further discloses wherein the business parameters further comprise
revenue (D1, Volume 2: page 4, Figure 4; page 8, paragraphs 1 and 2; page 12, paragraph 6);
capacity (D1, Volume 2: page 12, paragraph 7; page 13, Figure 7);

return on investment (ROI) (D1, Volume 2: page 32, paragraph 2; page 35, paragraph 7);

earnings before interest, taxes, and depreciation and amortization (EBITDA) (D1, Volume 2: page 39, paragraph 3);

earnings before interest and taxes (EBIT) (D1, Volume 2: page 39, paragraph 3);

OPEX as percentage of revenue (D2, Volume 2: page 48, paragraph 4); and

total expenditure as percentage of revenue (D2, Volume 2: page 5, Figure 3;

page 8, Figure 4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to include more business parameters in order to enable a comprehensive business decision.

Regarding Claim 6:

As described above, Ngi teaches the limitations of Claim 5, but Ngi does not explicitly disclose wherein the means for analyzing the business parameters for the plurality of network architectures comprises a means for computing the business parameters for each of said network architectures over a pre-determined study period.

However, EURESCOM P901-PF further discloses wherein the means for analyzing the business parameters for the plurality of network architectures comprises a means for computing the business parameters for each of said network architectures over a pre-determined study period (D1, Volume 2: page 6, paragraph 5; page 7, paragraph 3; page 75, paragraph 7; page 76, paragraph 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to analyze business parameters over a period of time to allow for comparison in order to enable a comprehensive business decision.

Regarding Claim 7:

EURESCOM P901-PF teaches the limitations of Claim 6 as described above.

Ngi further teaches wherein the means for comparing the business parameters for the plurality of network architectures comprises a means for reporting the business parameters for each of said network architectures over said pre-determined study period (paragraphs [0015], [0020], and [0033]); and

wherein the business solution comprises the network architecture with the least total expenditure (paragraphs [0033], [0097], and [0112]-[0114]).

Regarding Claim 8:
EURESCOM P901-PF teaches the limitations of Claim 3 as described above.

EURESCOM P901-PF further teaches
a means for engineering a plurality of network architecture for a pre-determined input user data (D1, Volume 2: page 28, paragraph 1);

a means for determining a network architecture cost and a leasing cost for each of said network architectures over a pre-determined study period (D1, Volume 2: page 5, paragraph 1 and D2, Volume 2: pages 30-31, Section 3.2.2);

a means for engineering management processes for managing each of said network architectures (D2, Volume 2: pages 33-34, Section 3.3); and

a means for determining a management processes cost for said management processes over said pre-determined study period (D2, Volume 2: pages 34-35, Section 3.4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to have the means to determine costs of architecture and processes to allow for comparison in order to enable a comprehensive business decision.

Regarding Claim 9:
EURESCOM P901-PF teaches the limitations of Claim 8 as described above.

EURESCOM P901-PF further teaches a means for inputting user data (D1, Volume 2: page 28, paragraph 1); and
a means for validating and calibrating
the input user data (D1, Volume 2: page 28, paragraph 1);
the network architecture cost (D1, Volume 2: page 5, paragraph 1);
the leasing cost (D2, Volume 2: pages 30-31, Section 3.2.2); and
the management processes cost for each of said network architectures (D2, Volume 2: pages 34-35, Section3.4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to have the means to input, validate and calibrate data to allow for comparison in order to enable a comprehensive business decision.

Regarding Claim 10:
EURESCOM P901-PF teaches the limitations of Claim 8 as described above.

EURESCOM P901-PF further teaches wherein the means for engineering the plurality of network architectures comprises a means for determining

an owned network elements (NEs) count (D1, Volume 2: page 14, paragraph 3);
a leased NEs count (D1, Volume 2: page 86, paragraph 7);

an owned customer premise equipment (CPE) count (D1, Volume 2: page 14, paragraph 3);
a leased CPE count (D1, Volume 2: page 86, paragraph 7);

an owned links count (D1, Volume 2: page 57, paragraphs 8-9; page 60, paragraph 3);
a leased links count (D2, Volume 2: page 67, Sections 6.3.1.1 and 6.3.1.2); and

a leased ports count for each of said network architectures (D2, Volume 2: page 64, paragraph 6);

and wherein said network architectures having NEs, CPE, and links from the same or different equipment suppliers (D1, Volume 2: page 49, paragraph 5; page 50, paragraph 5; page 86, paragraph 7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to have the counts of items to allow for calculation of costs in order to enable a comprehensive business decision.

Regarding Claim 15:
EURESCOM P901-PF teaches the limitations of Claim 8 as described above.

EURESCOM P901-PF further teaches wherein the means for engineering the management processes comprises means for engineering network management processes, and service and customer management processes; and wherein said management processes having processes from the same or different management processes suppliers (D2, Volume 1: page 11, Table 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to include management processes in order to enable a comprehensive business decision.

Regarding Claim 16:
EURESCOM P901-PF teaches the limitations of Claim 15 as described above.

EURESCOM P901-PF further teaches wherein the means for engineering network management processes comprises a means for selecting one or more of the following processes: inside plant maintenance; outside plant maintenance; network engineering; network provisioning; installation; testing; and repairs (D2, Volume 1: page 11, Table 1; page 12, Table 12).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to include network provisioning as a management process in order to enable a comprehensive business decision.

Regarding Claim 17:
EURESCOM P901-PF teaches the limitations of Claim 16 as described above.

EURESCOM P901-PF further teaches wherein the means for determining the management processes cost comprises a means for determining a process cost per NE for each of said network management processes for one or more of the following: a manual operations mode; a mechanized operations mode; and a manual and mechanized operations mode (D2, Volume 1: page 12, Table 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to consider the cost per NE for network maintenance to enable a comprehensive business decision.

Regarding Claim 18:
EURESCOM P901-PF teaches the limitations of Claim 15 as described above.

EURESCOM P901-PF further teaches wherein the means for engineering service and customer management processes comprises a means for selecting one or more of the following processes: customer relationship management (CRM); work order management (WOM); network inventory management (NIM); service activation and provisioning (SAP); fault management (FM); performance management (PM); accounting and billing; and security management (D2, Volume 1: page 11, Table 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to include customer

relationship as a management process in order to enable a comprehensive business decision.

Regarding Claim 19:
EURESCOM P901-PF teaches the limitations of Claim 18 as described above.

EURESCOM P901-PF further teaches wherein the means for determining the management processes cost comprises a means for determining a process cost per link for each of said service and customer management processes for one or more of the following: a manual operations mode; a mechanized operations mode; and a manual and mechanized operations mode (D2, Volume 2: page 68, Section 6.3.1.2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to consider the cost per link for a network to enable a comprehensive business decision.

Regarding Claim 21:
As described above, Ngi teaches the limitations of Claim 20, but Ngi does not explicitly disclose
wherein the means for causing the computer to receive the data for the plurality of network architectures comprises: a means for causing the computer to receive input user data for said network architectures; a means for causing the computer to receive network architectures data for said network architectures; and a means for causing the computer to receive management processes data for managing each of said network architectures.

However, EURESCOM P901-PF discloses wherein the means for causing the computer to receive the data for the plurality of network architectures comprises:

a means for causing the computer to receive input user data for said network architectures (D1, Volume 2: page 28, paragraph 1);

a means for causing the computer to receive network architectures data for said network architectures (D1, Volume 2: page 5, paragraph 1); and

a means for causing the computer to receive management processes data for managing each of said network architectures (D2, Volume 2: pages 34-35, Section3.4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to have the means to

receive data to allow for comparison in order to enable a comprehensive
business decision.

Regarding Claim 22:
EURESCOM P901-PF teaches the limitations of Claim 21 as described above.

EURESCOM P901-PF further teaches wherein the means for causing the
computer to receive the input user data comprises a means for causing the
computer to receive

traffic data (D1, Volume 2: page 10, paragraph 4);
customer data (D1, Volume 2: page 13, paragraph 3; page 14, paragraph 1);
and
financial and labour data for the plurality of network architectures (D1, Volume 2:
page 77, paragraph 1 and Figure 23).

It would have been obvious to one of ordinary skill in the art at the time of the
invention to modify Ngi with the teachings of EURESCOM to include traffic,
customer, and financial and labor data to allow for a thorough evaluation of a
communications network.

Regarding Claim 23:
EURESCOM P901-PF teaches the limitations of Claim 21 as described above.

EURESCOM P901-PF further teaches wherein the means for causing the
computer to receive the network architectures data comprises means for causing
the computer to receive network elements (NEs) data; CPE data; and links and
ports data for the plurality of network architectures (D1, Volume 2: page 47,
paragraph 5; page 65, paragraph 1).

It would have been obvious to one of ordinary skill in the art at the time of the
invention to modify Ngi with the teachings of EURESCOM to include network
elements, equipment, links, and ports to allow for a thorough evaluation of a
communications network.

Regarding Claim 24:
EURESCOM P901-PF teaches the limitations of Claim 23 as described above.

EURESCOM P901-PF further teaches wherein the means for causing the
computer to receive the network architectures data further comprises a means

for causing the computer to receive network architectures options for the plurality of network architectures (D1, Volume 2: page 28, paragraph 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to have a choice in architectures to allow for comparison in order to enable a comprehensive business decision.

Regarding Claim 25:

EURESCOM P901-PF teaches the limitations of Claim 21 as described above.

EURESCOM P901-PF further teaches wherein the means for causing the computer to receive the management processes data comprises means for causing the computer to receive network management data; and service and customer management data for managing each of the plurality of network architectures (D2, Volume 2: pages 34-35).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to include management data to enable a comprehensive business decision.

Regarding Claim 26:

EURESCOM P901-PF teaches the limitations of Claim 25 as described above.

EURESCOM P901-PF further teaches wherein the means for causing the computer to receive the management processes data further comprises means for causing the computer to receive network management options; and service and customer management options for managing each of said network architectures (D2, Volume 2: pages 34-35).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to include various management options to enable a comprehensive business decision.

Regarding Claim 27:

As described above, Ngi teaches the limitations of Claim 20, but Ngi does not explicitly disclose

wherein the means for causing the computer to analyze the received data comprises a means for causing the computer to compute the business parameters for said network architectures over said pre-determined study period.

However, EURESCOM P901-PF discloses wherein the means for causing the computer to analyze the received data comprises a means for causing the computer to compute the business parameters for said network architectures over said pre-determined study period (D1, Volume 2: page 6, paragraph 5; page 7, paragraph 3; page 75, paragraph 7; page 76, paragraph 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to analyze business parameters over a period of time to allow for comparison in order to enable a comprehensive business decision.

Regarding Claim 29:

As described above, Ngi teaches the limitations of Claim 20, but Ngi does not explicitly disclose

wherein the program is a self-contained Microsoft EXCEL-based decision support software tool comprises a plurality of EXCEL workbooks linked together.

However, EURESCOM P901-PF discloses wherein the program is a self-contained Microsoft EXCEL-based decision support software tool comprises a plurality of EXCEL workbooks linked together (D1, Volume 2: page 10, paragraph 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to use EXCEL for creating charts and tables as EXCEL capabilities are highly suited for creating comparison aides to enable a comprehensive business decision.

Regarding Claim 30:

As described above, Ngi teaches the limitations of Claim 20, but Ngi does not explicitly disclose wherein the program is a self-contained software tool comprises a number of sub-programs linked together and the sub-programs are written in one or more of the following computer languages: machine language, C/C++, virtual basic, and Java.

However, EURESCOM P901-PF discloses wherein the program is a self-contained software tool comprises a number of sub-programs linked together and the sub-programs are written in one or more of the following computer languages: machine language, C/C++, virtual basic, and Java (D1, Volume 2: page 10, paragraph 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of EURESCOM to use C++ as the programming language as C++ capabilities are highly suited for creating modules or sub-programs that can be linked together.

Regarding Claim 33:

As described above, Ngi teaches the limitations of Claim 32, but Ngi does not explicitly disclose wherein wherein the business parameters further comprise revenue, capacity, ROI, EB1TDA, EBIT, OPEX as percentage of revenue, and total expenditure as percentage of revenue.

However, EURESCOM P901-PF discloses wherein the business parameters further comprise revenue, capacity, ROI, EB1TDA, EBIT, OPEX as percentage of revenue, and total expenditure as percentage of revenue (See Claim 4).

Regarding Claim 34:

As described above, Ngi teaches the limitations of Claim 31, but Ngi does not explicitly disclose wherein the step of receiving data comprises a step of receiving input user data; network architectures data; management processes data; network architectures options; network management processes options; and service and customer management processes options for the plurality of network architectures.

However, EURESCOM P901-PF discloses wherein the step of receiving data comprises a step of receiving input user data; network architectures data; management processes data (See Claim 9); network architectures options (See Claim 8); network management processes options; and service and customer management processes options for the plurality of network architectures (See Claim 26).

Regarding Claim 37:

As described above, Ngi teaches the limitations of Claim 31, and Ngi also teaches wherein the step of comparing the business parameters for the plurality of network architectures comprises a step of reporting said business parameters for said network architectures over a pre-determined study period; and wherein the business solution comprises the network architecture with the least total expenditure (See Claim 7), but Ngi does not disclose said network architecture having NEs, CPE, and links from the same or different equipment suppliers; and having network management processes, and service and customer management processes from the same or different management processes suppliers.

However, EURESCOM P901-PF discloses said network architecture having NEs, CPE, and links from the same or different equipment suppliers (See Claim 10); and having network management processes, and service and customer management processes from the same or different management processes suppliers (See Claim 15).

Regarding Claim 38:
As described above, Ngi and EURESCOM P901-PF teach the limitations of Claim 37.

Ngi further teaches wherein the step of reporting the business parameters comprises a step of tabulating and graphically charting the business parameters for each of said network architectures over said pre-determined study period (See Claim 28).

17. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ngi

in view of EURESCOM Project P901-PF and in view of Arbel et al., U.S. Patent

Application Publication Number US 2004/0008673 A1 (hereinafter referred to as Arbel).

Regarding Claim 11:
EURESCOM P901-PF teaches the limitations of Claim 10 as described above.

EURESCOM P901-PF and Arbel further teach wherein the means for determining the network architecture cost and the leasing cost for each of the plurality of network architectures comprises:

a means for determining a price per network element (NE) (D1, Volume 2: page 64, paragraphs 2-4), a footprint per NE cost (Arbel, paragraphs [0025] and [0074]), and a power consumption per NE cost (D2, Volume 2: page 34, Table 7; page 35, Table 9);

a means for determining a price per CPE (D1, Volume 2: page 64, paragraphs 2-4), a footprint per CPE cost (Arbel, paragraphs [0025] and [0074]), and a power consumption per CPE cost (D2, Volume 2: page 34, Table 7; page 35, Table 9); and

a means for determining a price per link and a link transmission rate (D1, Volume 2: page 57, paragraphs 8-9; page 60, paragraph 3 and D2, Volume 2: Page 68, Section 6.3.1.2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of Arbel to have the prices of items to allow for calculation of costs.

Regarding Claim 12:
EURESCOM P901-PF teaches the limitations of Claim 11 as described above.

EURESCOM P901-PF further teaches wherein the means for determining the network architecture cost comprises a means for computing a total owned NEs cost; a total owned CPE cost; and a total owned links cost for each of said network architectures over said predetermined study period (D1, Volume 2: page 47, paragraph 5; page 65, paragraph 1); and

wherein the means for determining the leasing cost comprises a means for computing a total footprints cost (Arbel, paragraphs [0025] and [0074]) and a total power consumptions cost for said owned NEs and CPE over said pre-determined study period (D2, Volume 2: page 34, Table 7; page 35, Table 9).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of Arbel to calculate total costs to enable a comprehensive business decision.

Regarding Claim 13:
EURESCOM P901-PF teaches the limitations of Claim 10 as described above.

EURESCOM P901-PF further teaches wherein the means for determining the leasing cost further comprises: a means for determining a leased per NE cost, a footprint per NE cost (Arbel, paragraphs [0025] and [0074]), and a power consumption per NE cost; a means for determining a leased per CPE cost, a footprint per CPE cost (Arbel, paragraphs [0025] and [0074]), and a power consumption per CPE cost; a means for determining a leased per link cost and a link transmission rate; a means for determining a leased link per unit length cost, a unit length per link count, and a link transmission rate; and a means for determining a leased per port cost (See Claim 11).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of Arbel to include any leasing costs to enable a comprehensive business decision.

Regarding Claim 14:
> EURESCOM P901-PF teaches the limitations of Claim 13 as described above.

> EURESCOM P901-PF further teaches wherein the means for determining the leasing cost comprises a means for computing a total leased NEs cost; a total leased CPE cost; a total footprints cost (Arbel, paragraphs [0025] and [0074]) and a total power consumptions cost for said leased NEs and CPE; a total leased links cost; a total leased links for unit length cost; and a total leased ports cost for each of said network architectures over said pre-determined study period (See Claim 13).

> It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngi with the teachings of Arbel to calculate total costs to enable a comprehensive business decision.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEBRA ANTONIENKO whose telephone number is (571)270-3601. The examiner can normally be reached on Monday through Friday, 6:30 AM to 4:00 PM, EST, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Kyle can be reached on 571-272-6746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Debra Antonienko/
Examiner, Art Unit 4194
01/30/2008

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